

From: [Jennifer Woronets](#)
To: [Kristine Koch/R10/USEPA/US@EPA](#)
Cc: [ANDERSON_Jim@deg.state.or.us](#); [audiehuber@ctuir.com](#); [Eric Blischke/R10/USEPA/US@EPA](#); [Bob Wyatt; cunninghame@gorge.net](#); [erin.madden@gmail.com](#); [Greg.Gervais@noaa.gov](#); [Chip Humphrey/R10/USEPA/US@EPA](#); [JD Williams](#); [Jennifer Peers](#); [Jennifer Woronets](#); [Julie Fox](#); [Julie Weis](#); [Keith Pine](#); [Kristine Koch/R10/USEPA/US@EPA](#); [lisa.bluelake@grandronde.org](#); [MCCLINCY Matt](#); [McKenna, Jim](#); [Michael Karnosh](#); [Rick Applegate](#); [Robert Neely](#); [Rose Longoria](#); [sheila@ridolfi.com](#); [Bob Wyatt](#); [david.ashton@portofportland.com](#); [wolffg@plu.edu](#); [J Betz](#); [Jennifer Woronets](#); [Jim.McKenna@portofportland.com](#); [karen.traeger@total.com](#); [Patty Dost \Schwabe\](#); [Rick Applegate](#); [Steve Parkinson](#); [Jennifer Woronets](#); [Keith Pine](#); [Amanda Shellenberger](#); [Carl Stivers](#)
Subject: FW: LWG Stormwater Check-ins and Path Forward
Date: 03/26/2009 01:23 PM

Kristine,

Please see below from Amanda Shellenberger.

Thank you,
Jen Woronets ☺
Anchor QEA, LLC
jworonets@anchorqea.com
6650 SW Redwood Lane, Suite 333
Portland, OR 97224
503-670-1108 Ext 24
503-670-1128 Fax

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From: Amanda Shellenberger
Sent: Thursday, March 26, 2009 12:59 PM
To: Jennifer Woronets
Subject: LWG Stormwater Check-ins and Path Forward

Jen - Can you please forward to Kristine Thanks!

Hi Kristine -

Attached is the stormwater check-ins path forward as attached in our phone call last week. This path forward has been endorsed by LWG.

Check-in Point #1 - Partitioning Coefficients

· More clarification is needed on what partitioning coefficients will be used for metals. LWG had recommended using sampling location specific values for metals and literature values for all other chemicals. EPA supports this recommendation because there was shown to be a statistically significant difference between the site-specific metals partitioning coefficients and the literature values (this should be shown in future discussion to support this decision). Kristine noted that using

the central tendency (e.g., median) of the partitioning coefficients calculated with all sites combined would give similar answers because there was not a statistically significant difference between the central tendency of the individual sites and all sites combined, which would make calculations simpler. The path forward on this is to do a sensitivity analysis and decide which site-specific metals partitioning coefficients to use.

- Kristine also noted that she found no difference in the central tendency of the partitioning coefficients calculated from different land uses from the central tendency for the individual sites, so that wasn't something to worry about in the path forward.
- Need verification that literature values are being used for organics and which site-specific values will be used for metals. The path forward is that we will use the range of literature values set forth in Table 2-2 for organics. For metals, the range of location-specific calculated partitioning coefficients will be used, and in addition, a sensitivity analysis will be conducted to determine if using the median site-wide calculated value makes more sense. In that case, the median of the site-wide value could be used as the central tendency, with location-specific calculated values still being used as the minimum and maximum values. No further check-in is necessary assuming EPA agrees to this path forward.

Check-in Point #2 - Replicate/Duplicate Analysis

- Kristine noted that we should explain more clearly our reasoning for using $\frac{1}{2}$ the detection limit for this step. We discussed that the reasoning for this was that we couldn't use proUCL at this point because it was a preliminary analysis and Goodness of Fit tests had not been run because outliers still existed in the dataset. The path forward for this is to add more explanation to the final text.
- Kristine agreed with all decisions made except for OF18. The recommended path forward for OF18 is to wait until we do the loading comparison for the multiple use sites and see what we get, and then decide whether or not it makes sense to segregate certain data points.
- No further check-in is necessary.

Check-in Point #3 - Reclassification Analysis

- Kristine agreed that the overall process was fine.
- Kristine noted that we should look at the TOC data set to see if there were any outliers. The path forward is to do this analysis and segregate outliers using the same process as for other chemicals. Since TOC is not something that will be modeled by itself, sites may be classified as representative or non-representative but this information will only be used when TOC is used to normalize the data. (So if a site was non-representative for TOC, then the site-specific TOC median would be used to normalize instead of the TOC by land use.) Segregating outliers could result in a lower central tendency for the TOC by land use, which would affect OC normalized sediment chemical solids rates calculated from sediment trap data.
- Kristine noted that we should add more explanation why the reclassification was run for heavy

industrial and light industrial but not other land uses. Path forward is to add explanation that there were no apriori assumptions for other land uses, so the reclassification analysis was not applicable and also to explain that the St.John's Bridge data will be examined in a separate process as agreed to by the Stormwater Technical Team and reclassified as appropriate based on that analysis.

- Need to add final classification column for each chemical (except PCBs) to show the final classification of each chemical in the 4-4 tables and add final table 4-1 with each specific chemical, rather than chemical class (except PCBs), that is unique. Also need to make sure all classifications are correct; there were some discrepancies noted between tables.
- No further check-in is necessary.

Check-in Point #4 - Stormwater Loads

- Kristine noted that we should further justify our decision to use $\frac{1}{2}$ the detection limit for non-detects when the use of ProUCL was not possible. You suggested the following path forward in order to confirm this decision:
 - Assume zero for all non-detects and calculate the mean
 - Assume the detection limit for all non-detects and calculate the mean.
 - Assume $\frac{1}{2}$ the detection limit for all non-detects and as long as this number is between the two other means, then the $\frac{1}{2}$ detection limit assumption is fine.
- For sediment traps, Kristine recommended that if there was an elevated detection limit in Round 3A and also a non-detect in Round 3B, then we should segregate the Round 3a result instead of averaging the two. The path forward is to look into this and see if large differences exist between detection limits in Round 3A and 3B. If large differences in detection level exist due to limited sample mass in either round of sampling, then the higher detection limit would be segregated.
- In cases where ProUCL cannot be used to generate a 95UCL, Kristine noted that a 50th percentile statistic would be useful, and it could be useful to develop a decision tree to detail which statistics are used. The path forward is to add this statistic in, and look into developing a decision tree process to be discussed during the modeling check-in process.
- Kristine noted that the discussion of which stormwater loads were appropriate for use in the AFT model should be discussed at a later date as part of the modeling check-in and that LWG should justify which statistics are used. The path forward is to further discuss stormwater loads as part of the modeling check-in process.

Amanda Shellenberger, P.E.
ANCHOR QEA, LLC
ashellenberger@anchorqea.com
1423 Third Avenue, Suite 300
Seattle, WA 98101
T 206.287.9130

D 206.903.3371
F 206.287.9131

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www.anchorqea.com

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